UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,344	06/29/2001	Avraham Mualem	42390P11391	6903

8791	7590	02/06/2006

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EXAMINER
SHIFERAW, ELENI A

ART UNIT	PAPER NUMBER
2136	

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
SUPPLEMENTAL ***Notice of Allowability***	09/895,344	MUALEM ET AL.
	Examiner	**Art Unit**	
	Eleni A. Shiferaw	2136	

-- ***The MAILING DATE of this communication appears on the cover sheet with the correspondence address--***

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *9/30/2005*.

2. ☒ The allowed claim(s) is/are *1-3,6-13,16-23,26-30,41,44 and 45*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some*   c)☐ None   of the:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
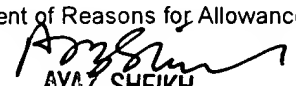
   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
      Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

DETAILED ACTION

1.   Pre-Appeal brief request for review, under CFR 41.37, has been filed. Claims 1-41 and

43-45 have been examined. Examiners amendment has been made for all independent claims 1,

11, 21, and 41, and dependent claims 6, 16, 26, and 44-45 and claims 4-5, 14-15, 24-25, 31-40,

and 43 have been canceled based on the telephone interview, with Vincent H. Anderson, on

October 24, 2005.

2.   *On the advisory action dated September 15, 2005, examiner inadvertently checks box "do*

not enter" when should have been entered. As of January 20, 2006, the office checks

"Amendment will be entered" box, for advisory action mailed on September 9, 2005.

EXAMINER'S AMENDMENT

3.   An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

  Authorization for this examiner's amendment was given in a telephone interview with

Vincent H. Anderson on October 24, 2005.

4.   Examiner amends claims 1, 6, 11, 16, 21, 26, 41 and 44-45, and cancels claims 4-5, 14-

15, 24-25, and 43.

1.   (Currently Amended) A method comprising:

associating a security association with a traffic stream;

associating a metric value with the security association;

modifying the metric value based on an amount of network traffic generated for the traffic

stream; and

dynamically mapping the traffic stream to one of multiple components that perform

cryptography operations based on the metric value () :

wherein dynamically mapping traffic streams to one of multiple components comprises

selecting between performing cryptography operations with a driver agent and performing

cryptography operations with a network interface using cached cryptography information; and

wherein the dynamic mapping further comprises replacing a cached security association

with a non-cached security association when the metric value of the non-cached security

association differs from the metric value of the cached security associations by at least a

predetermined amount.

4.   (Canceled).

5.   (Canceled).

6.   (Currently Amended) The method of claim 5 1 wherein the predetermined amount is

selected based on a cost-based analysis.

11.   (Currently Amended) An apparatus comprising:

a network interface of a Network Interface Card coupled to receive network traffic

streams; and

a driver agent coupled to communicate with the network interface, the driver agent to

associate a security association with a traffic stream, associate a metric value with the security

association, modify the metric value of the security association based on how much network

traffic is received for the traffic stream, and dynamically map the traffic stream to one of

multiple components that perform cryptography operations based on the metric value (-) :

wherein dynamically mapping traffic streams to one of multiple components comprises

selecting between performing cryptography operations with a driver agent and performing

cryptography operations with a network interface using cached cryptography information; and

wherein the dynamic mapping further comprises replacing a cached security associations

with a non-cached security association when the metric value of the non-cached security

association is greater than the metric value of the cached security association by at least a

predetermined amount.

14.　(Canceled).

15.　(Canceled).

16.　(Currently Amended) The method of claim 1̶5̶　11 wherein the predetermined amount is

selected based on a cost-based analysis.

21.　An article of manufacture comprising a machine-accessible medium with instructions

stored thereon A̶n̶ ̶a̶r̶t̶i̶c̶l̶e̶ ̶c̶o̶m̶p̶r̶i̶s̶i̶n̶g̶ ̶a̶ ̶m̶a̶c̶h̶i̶n̶e̶-̶a̶c̶c̶e̶s̶s̶i̶b̶l̶e̶ ̶m̶e̶d̶i̶u̶m̶ to provide machine-readable

instructions that, when executed, cause one or more electronic systems to:

associate a security association with a traffic stream;

associate a metric value with the security association;

modify the metric value based on an amount of network traffic generated for the traffic

stream; ~and~

dynamically map the traffic stream to one of multiple components that perform

cryptography operations based on the metric value (-) :

wherein dynamically mapping traffic streams to one of multiple components comprises

selecting between performing cryptography operations with a driver agent and performing

cryptography operations with a network interface using cached cryptography information; and

wherein the dynamic mapping further comprises replacing a cached security association

with a non-cached security association when the metric value of the non-cached security

association is greater than the metric value of the cached security association by at least a

predetermined amount.

24.   (Canceled).

25.   (Canceled).

26.   (Currently Amended) The method of claim ~25~ 21 wherein the predetermined amount is

selected based on a cost-based analysis.

41.   A method comprising:

associating a security association with a traffic stream;

associating a metric value with a security association;

initializing the metric value to a predetermined value when the security association is

received by a driver agent, the metric value to be modified based at least in part on traffic

generated for the associated traffic stream;

determining whether the security association necessary for performing cryptography

operations on a packet of the traffic stream is cached ( ) :

determining whether the security association should be cached based on the metric value;

and

wherein determining whether the security association should be cached further

comprises:

      increasing the value of the metric value by a predetermined amount when the

associated security association is added to a cache;

      incrementing the value of the metric value when a packet for the associated traffic

stream is received; and

      determining whether the metric value is greater than the lowest metric value of

cached security associations by at least a predetermined amount.

43.   (Canceled).

44.   (Currently Amended) The method of claim 43 41 further comprising periodically

decreasing the metric value.

45.   (Currently Amended) The method of claim 43 41 further comprising periodically

evaluating the metric value to determined whether the security association should be cached.

Allowable Subject Matter

5.   The following is an examiner's statement of reasons for allowance:

Claims 1-3, 6-13, 16-23, 26-30, 41, and 44-45 are allowed.

Claims 1, 11, and 21: Prior art of record neither alone nor in combination teach a

method/apparatus/medium of associating a metric value with the security association, associating

a security association with a traffic stream, and dynamically mapping traffic streams to one of

multiple components comprises selecting between performing cryptography operations with a

driver agent and performing cryptography operations with a network interface using cached

cryptography information and by replacing a cached security association with a non-cached

security association when the metric value of the non-cached security association differs from

the metric value of the cached security association by at least a predetermined amount and the

metric value is modified based on an amount of network traffic generated for the traffic stream.

Claim 41: Prior art of record neither alone nor in combination teach a method of associating a

metric value with a security association, associating security association with a traffic stream,

and when the security association is received by a driver agent, initializing the metric value to a

predetermined and modifying the metric value based at least in part on traffic generated for the

associated traffic stream, and determining whether the security association necessary for

performing cryptography operations on a packet of the traffic stream is cached by increasing the

value of the metric value by a predetermined amount when the associated security association is

added to a cached, by incrementing the value of the metric value when a packet for the

associated traffic stream is received, and by determining whether the metric value is greater than the lowest metric value of cached security associations by at least a predetermined amount.

Claims 2-3, 6-10, 12-13, 16-20, 22-23, 26-30, and 44-45 are allowed because of dependency.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."
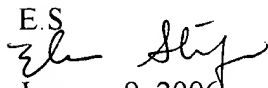
Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. 6,665,306 B1: network controller indicator indicating whether the received data

should be destined to an external network processor or internal
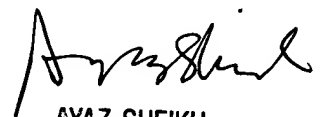
computer memory.

6,477,646 B1: cryptograph accelerator IPSec processing chip allowing significant

performance improvement.

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eleni A. Shiferaw whose telephone number is 571-272-3867. The examiner can normally be reached on Mon-Fri 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

E.S

January 9, 2006

AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100